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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/774,837	02/09/2004	JonYeon Oh	2003P15546US01	8800
7590 05/08/2006			EXAMINER	
Elsa Keller Intellectual Property Department SIEMENS CORPORATION 170 Wood Avenue South Iselin, NJ 08830			BOES, TERENCE	
			ART UNIT	PAPER NUMBER
			3682	
DATE MAILED: 05/08/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/774,837

Applicant(s)

OH ET AL.

Examiner

Terence Boes

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/22/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Priority***

Applicant's claim for the benefit of a prior-filed application under is acknowledged.

### ***Drawings***

The drawings were received on 5/21/04. These drawings are acceptable.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "generally" in claims 1,8, and 20 is a relative term which renders the claim indefinite. The term "generally" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is unclear as to what "generally" elliptically-shaped is.

The term "generally" in claims 1,8 and 20 is a relative term which renders the claim indefinite. The term "generally" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is unclear as to what "generally" spherical is.

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The term "generally" in claims 1,8 and 13 is a relative term which renders the claim indefinite. The term "generally" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is unclear as to what "generally" adjacent is.

The term "generally" in claims 7,12 and 19 is a relative term which renders the claim indefinite. The term "generally" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is unclear as to what "generally" X-shape is

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1,2,4,8,13,14,16 and 20, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Sangret USP 6,269,709.

Sangret discloses:

Re Clms. 1,20

- A body (10)
- A generally elliptically-shaped (as best understood) recess (Fig. 2, recess is shown receiving engagement member (32))

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- An end of a shaft (26)
- An engagement member (32) having a spherical portion (32 is a sphere) and a surface for contacting the end of a shaft (spherical engagement member (32) is shown contacting shaft (26), and therefore contains a surface for contacting)

Re Clms. 2,14

- Housing of a motor (housing surrounding electric motor (11)) integral with body

Re Clms. 4,16

- A gearhousing (60)
- A shaft of a motor (24)
- Body (10) integral with gearhousing (60)

Re Clm. 8

- Gearhousing (60) having a gear (40)
- Shaft (24) having a worm (20)
- A body (10)
- Generally elliptically-shaped (as best understood) recess (Fig. 2, recess is shown receiving engagement member (32)) disposed adjacent to an end of the shaft
- Engagement member (32) having a spherical portion (32 is spherical) received in a press-fit arrangement with the recess (the shaft is shown

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pressing the engagement member to fit in the recess and is therefore considered by the examiner to be a press-fit arrangement)

- A surface (spherical engagement member (32) is shown contacting shaft (26), and therefore contains a surface for contacting) of the engagement member contacting the end of the shaft

Re Clm. 13

- A body (10)
- Means for receiving (Fig. 2, recess is shown receiving engagement member (32)) disposed generally adjacent to an end of the shaft
- Means for engaging (32) having a portion arranged to be received in a press-fit arrangement with the means for receiving (the shaft is shown pressing the engagement member to fit in the recess and is therefore considered by the examiner to be a press-fit arrangement)
- Whereby, when the surface of the means for engaging is contacted by the end of the shaft, the portion of the means for engaging is press-fitted into the means for receiving to control endplay of the shaft (see Fig. 2, (32) is shown contacting the end of the shaft as well as fitting into the recess)

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 3,5,9,10,15,17, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Sangret USP 6,269,709 in view of Schönsteiner USP 5,794,480.

Sangret discloses all of the claimed subject matter as described above.

Sangret does not disclose an engagement member defined by a concave surface that mates with a matching convex surface defined at the end of a shaft to define point to point contact.

Schönsteiner teaches an engagement member (4) defined by a concave surface (5) that mates with a matching convex surface defined at the end of a shaft (6) to define point to point contact for the purpose of preventing lateral deflection of a worm gear shaft (C2/L50-57).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the teachings of Sangret and provide an engagement member defined by a concave surface that mates with a matching convex surface defined at the end of a shaft, as taught by Schönsteiner, for the purpose of preventing lateral deflection of a worm gear shaft.

4. Claims 6,7,11,12,18,19, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Sangret USP 6,269,709 in view of Pohl DE 195 13 970 A 1.

Sangret discloses all of the claimed subject matter as described above.

Sangret does not disclose upstanding ribs extending from a bottom of a recess so as to define a deformable stop, wherein the ribs form an X-shape.

Pohl teaches upstanding ribs (28) extending from a bottom of a recess (20) so as to define a deformable stop, wherein the ribs form an X-shape for the purpose of providing elastic deformation ((28) is a spring element, (C3/L20-25)).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the teachings of Sangret and provide upstanding ribs extending from a bottom of a recess so as to define a deformable stop, wherein the ribs form an X-shape, as taught by Pohl, for the purpose of providing elastic deformation.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patents 4,225,199; 6,486,577; 6,393,929; 5,971,617 disclose ribs or deformable stopping means. US Patents 5,886,437; 6,481,306; 4,993,277; 5,924,326; 6,965,180; 6,789,443 disclose endplay structures.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terence Boes whose telephone number is (571) 272-4898. The examiner can normally be reached on Monday - Friday 9:00 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TB *TS*  
5/4/2006

  
DAVID FENSTERMACHER  
PRIMARY EXAMINER 5/4/06